VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Advancing Animal Disease Traceability in Virginia

Strategic Plan, 2015-2018

Purpose

This document outlines the strategic direction and major goals of the Animal Disease Traceability (ADT) program in the Commonwealth of Virginia from 2015 to 2018 as administered by the Virginia Department of Agriculture and Consumer Services (VDACS). The Virginia State Veterinarian and Office of Veterinary Services are responsible for the administration of this program, within regulatory guidelines established by the United States Department of Agriculture, Animal and Plant Inspection Service, Veterinary Services (USDA-APHIS-VS) division and subject to applicable federal and state laws. Funding is provided through annual cooperative agreements with USDA-APHIS-VS and appropriations from the Virginia General Assembly.

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Additional information is available on the following web sites as of January 2015:
http://www.VAnimalID.info
http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/animalhealth

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Background

The capability to efficiently and effectively deal with livestock diseases of concern when they occur is not only important to the health of livestock populations in Virginia, but is also important in supporting rural economies, maintaining interstate and international trade and increasing consumer confidence in food production systems. Unfortunately, due in large part to our success in eradicating or reducing the impact of some livestock diseases in the United States, relatively few animals that are not involved in active disease investigations are being tested in comparison to 15 to 20 years ago. As the incidence of some diseases (e.g., brucellosis) and "first-point" testing of livestock for diseases has declined, the emphasis on tagging animals with official, traceable identification has also declined in many public animal health programs. The re-emergence of diseases such as bovine tuberculosis in several states over the past ten years, as well as intense concern over foreign animal diseases such as foot-and-mouth and BSE, have brought the issue of disease traceability back to the forefront as a concern that needs to be addressed by the livestock industry and public animal health organizations.

The introduction of the National Animal Identification System (NAIS) in 2004 was an attempt by USDA to reverse the trend discussed above and increase the use of new tagging systems and technologies by U.S. livestock producers. Unfortunately, many producers in Virginia and elsewhere saw NAIS as an example of a large and ineffectual federal program with substantial negative implications, even though most understood the overall intent of the program. The Virginia Department of Agriculture and Consumer Services (VDACS) in cooperation with the Virginia livestock industry, Virginia Cooperative Extension (VCE) and USDA APHIS Veterinary Services (VS), spent considerable time and effort to market and implement NAIS in Virginia. A great deal of good work was accomplished in Virginia to improve traceability, but ultimately, NAIS was ended by USDA in 2010 after years of controversy and continued opposition by some industry groups.

Early in 2010, USDA Secretary Vilsack introduced a new national program called Animal Disease Traceability (ADT). This program proposed to improve disease traceability in the US by focusing on the identification of animals involved in interstate movements, and leaving intrastate traceability concerns largely to state animal health officials working with local producer groups. While much improved over the NAIS model in many respects, the ADT program still requires large numbers of animals to be tagged with official identification and the distribution of tags to be carefully documented. In addition, there is increased emphasis on documenting interstate movement of animals (primarily cattle) through Certificates of Veterinary Inspection (CVI) or other documents associated with the transporting of animals in interstate commerce. This has increased the burden on state animal health officials, local livestock market operators, cattle dealers, private veterinarians and processing facilities to create, store and make available extensive information on identification and movement records.

The Virginia Animal Disease Traceability program seeks to create cost-effective and practical solutions to the two main challenges in improving livestock traceability: 1) increasing the use of official and unique identification devices; and 2), capturing animal movement records (location, animal identification and sighting date) necessary to support effective tracing of diseased animals when necessary. Since 2004, the Virginia Animal Disease Traceability Working Group (see Appendix A for list of members), representing a cross-section of animal agriculture organizations in the Commonwealth, has provided advice and leadership in the implementation of the ADT program in Virginia.

Summary of Program Objectives and Accomplishments, 2011-2014

In 2011, the Virginia ADT program drafted a three-year plan of action as required by cooperative agreements with USDA-APHIS-VS. This initial strategic plan was approved by USDA in March of 2011 and has guided the implementation of program activities and expenditures over the past three to four years. The following table summarizes the major objectives discussed in the 2011 Plan and accomplishments relative to these goals. These estimates are based on cumulative information provided in detailed quarterly accomplishments reports to USDA from 2011 to 2014 and analysis of information available in state animal health databases.

	Objectives and Accomplishments	Estimated Achievement
1	**Develop and maintain personnel and organizational resources to support an effective traceability program.**	**100%**
	• A full-time program coordinator has been in place each year to manage ADT activities statewide, provide leadership on information system development and maintain program continuity over the reporting period • Funding was secured through federal cooperative agreements and state appropriations to effectively implement the ADT program • ADT activities were successfully integrated with duties of existing staff within the Office of Veterinary Services (field veterinarians, livestock inspectors and support staff)	
2	**Increase the use of official identification devices in target cattle groups.**	**>100%**
	• Over 140,000 840-series electronic tags distributed through vaccination, testing and market programs (150 percent increase from 2011 to 2014) • Over 164,000 metal NUES tags distributed (60 percent increase from 2011 to 2014) • United DHIA in Virginia converted from non-official American ID to NUES tags in 2013 and distributed 22,600 tags to date • Increased outreach and tag distribution to dairy producers for tagging steers and calves in 2013-14 • Provided over 5,000 official identification tags for 4-H and Extension programs	
3	**Create efficient data capture and management systems to increase the availability of accurate traceability information.**	**95%**
	• Began using the CoreOne application in 2011 as a central database for all animal health information; all vaccination, test and tag distribution records are now managed in this system • Electronic forms have been provided to private veterinarians to record regulatory vaccination and test information; in 2014, 39% of all bovine TB tests statewide were submitted electronically, short of our 50% goal, but a 38% increase over submission rates in 2012 • Semi-automated data logger systems have been developed and implemented in 17 livestock markets to capture traceability data for adult cattle; over 15,000 traceability records are produced annually compared	

	to 0 before the program was initiated • Other ADT information systems provided by USDA are also in use to manage premises registration (SPIS) and tag traces (AIMS)	
4	**Revise state animal health regulations to support improved animal disease traceability.**	
	• State animal entry regulations were revised to be more consistent with the ADT Rule and went into effect January 2012 • State regulations concerning the operation of livestock markets and cattle dealers have been revised and are currently open for public comment; implementation expected by January 2016 • Formal MOA's have been developed with adjacent states regarding cattle movements to and from approved livestock markets/tagging sites and commuter herds that have improved traceability of animal movements • MOA established with United DHIA in Virginia to distribute official NUES tags to dairy producers	
5	**Effectively communicate traceability plan to stakeholders.**	**100%**
	• The Virginia ADT Working Group has met at least two times each year and continues to represent a broad cross-section of animal agriculture in the Commonwealth • Numerous articles on ADT have been written for industry publications and a new semi-annual newsletter distributed by the Office of Veterinary Services • The program coordinator and/or veterinary staff regularly attend and exhibit at major industry meetings • Veterinary staff continue to discuss ADT-related issues as a part of veterinary accreditation seminars (108 practitioners attended sessions in 2014) • The program web site was significantly updated in 2014 to reflect the current status of ADT at federal and state levels (www.VAnimalID.info)	
6	**Meet federal traceability performance standards and animal movement reporting requirements.**	**100%**
	• All traceability performance tests submitted by other states or USDA-APHIS-VS have been completed as quickly as possible and results reported • A summary of interstate animal movements and number of official identification devices distributed has been submitted to USDA-APHIS-VS every quarter during the reporting period	

Summary of Objectives for 2015-2018

In general, we believe animal disease traceability is on the right track in Virginia and do not expect major shifts in policies or program objectives over the next three years. Efficiently capturing data from interstate livestock movements remains the one area where we have made relatively little progress, but we anticipate addressing this issue in the next 6 to 12 months. Otherwise, we expect incremental improvements in traceability as more producers, market owners and veterinarians gradually adjust to ADT requirements. This will be driven largely by how other states enforce federal and state requirements for interstate animal movements, especially those that are destinations for large numbers of Virginia cattle.

Objective 1 - Provide effective leadership and coordination of animal disease traceability activities in Virginia.

A full-time program coordinator continues to be required to manage the Virginia ADT program in the manner that it has been for several years. This position not only serves as the statewide coordinator of the traceability program, but also manages all animal health data collected and maintained by the Office of Veterinary Services (OVS). In addition, this position supports animal disease investigations and emergency response functions with information technologies such as mobile data collection devices and geographic information systems. The program coordinator is the principal contact on ADT-related issues for livestock producers, veterinarians and others involved in the livestock industry in Virginia. This position is also expected to interact with USDA personnel and animal health officials in other states to insure that the Virginia ADT program is compatible with policies and procedures at national and regional levels. The program coordinator works closely with the OVS Program Manager, State Veterinarian, USDA-APHIS-VS Assistant District Director and the Virginia Animal Disease Traceability Working Group to improve animal disease traceability in the Commonwealth (see Appendix B for VDACS staff involved in the ADT program).

Table 1. Annual resource requirements and need for assistance to support Objective 1.

Resource		Purpose	Expected annual cost not covered by state funds
Personnel	Program Coordinator	• Manage USDA ADT cooperative agreement, financial resources, procurement activities and reporting requirements • Manage traceability performance tasks • Support animal disease investigations • Principal contact for stakeholders • Manage traceability data collection and processing • Research and implement new information management technologies	$112,173 (incl. fringe and indirect costs)
Travel	In-state	• Attend industry meetings and meet informally	$1,000

		with stakeholders to promote program objectives	
	Out-of-state	• Attend national and/or regional meetings related to ADT to maintain knowledgebase and professional relationships (2-3 per year)	$3,000
Supplies	Personal computer and network connectivity	• For use by program coordinator to manage program documentation and information resources, access online ADT-related applications, and interact with stakeholders	$1,680
	Software upgrades and maintenance (COTS)	• ArcGIS 10.x annual maintenance and other desktop software	$1,000
	Office supplies		$367
	Postage and shipping		$200
		Total	**$119,420**

Objective 2 - Increase use of official identification in target cattle groups.

The distribution of official identification (ID) devices in Virginia has increased substantially since the ADT Rule was published in 2010 (see Appendix C for types of official ID tags distributed in Virginia). In the past year, distribution has increased by over 50 percent; primarily due to demand for 840 and NUES tags in the cattle sector (Figure 1). We are also seeing relatively high compliance in the use of official ID for cattle on regulatory test charts and Interstate Certificates of Veterinary Inspection (ICVI) (see Appendix D). The Virginia ADT Working Group has endorsed the use of 840-series radio frequency identification (840-RFID) tags as the primary form of official identification for breeding age cattle in Virginia. Many of the larger dairies in the state are transitioning to RFID technology in their milking parlor and feeding systems. Virginia Cooperative Extension is promoting the use of herd management software and associated electronic data capture technology to improve efficiencies in larger cow-calf operations and 4-H livestock programs are also moving in this direction to better manage exhibition events. Some regional cattlemen's groups have already adopted RFID tags as their primary form of identification, and eventually, we expect the larger livestock markets in Virginia to upgrade current business software systems to incorporate the ability to capture electronic ID records.

We believe electronic tags will result in more accurate collection of animal identification and more rapid conversion of raw data into useable information, and therefore feel that electronic tags and associated data capture systems represent a better investment of public resources in comparison to visual tags. To assist the livestock industry in transitioning to official electronic tags, the Virginia ADT Program will continue to provide 840-RFID tags at no cost to accredited veterinarians, approved livestock markets and tagging sites and Extension programs as long as adequate funds are available. Electronic tags will be applied primarily to breeding age cattle and animals that are likely to become part of breeding herds in Virginia or adjacent states. Most animals that receive these tags are involved in regulatory testing, vaccination or market inspection programs. In addition, 840-RFID tags will be provided to Extension programs that promote improved record-keeping and youth involvement in livestock management (i.e., 4-H and similar

programs). The distribution of all official ID tags is recorded by program staff or cooperators and entered to our database on a quarterly basis.

Silver “brite” and orange metal “Bangs” tags that conform to National Uniform Ear-Tagging Specifications (NUES) will also be made available to veterinarians, markets and producers who prefer these tags. Metal tags will be the preferred form of official ID for certain classes of cattle (e.g., dairy calves and steers) that are likely to be exported into regional feeder channels within a year of birth. Official back tags will continue to be provided to approved livestock markets and buying stations for use as temporary identification during sale activities and for cattle moving direct to slaughter. The distribution of metal NUES tags will be recorded by program staff or cooperators and entered to our database on a quarterly basis.

VDACS has a memorandum of agreement in place with United Dairy Herd Improvement Association (UDHIA) and USDA-APHIS-VS that allows UDHIA to distribute official ID tags to their clients (about 300 dairies in Virginia). Tag distribution is recorded by UDHIA personnel and provided to VDACS in an electronic spreadsheet on a quarterly basis.

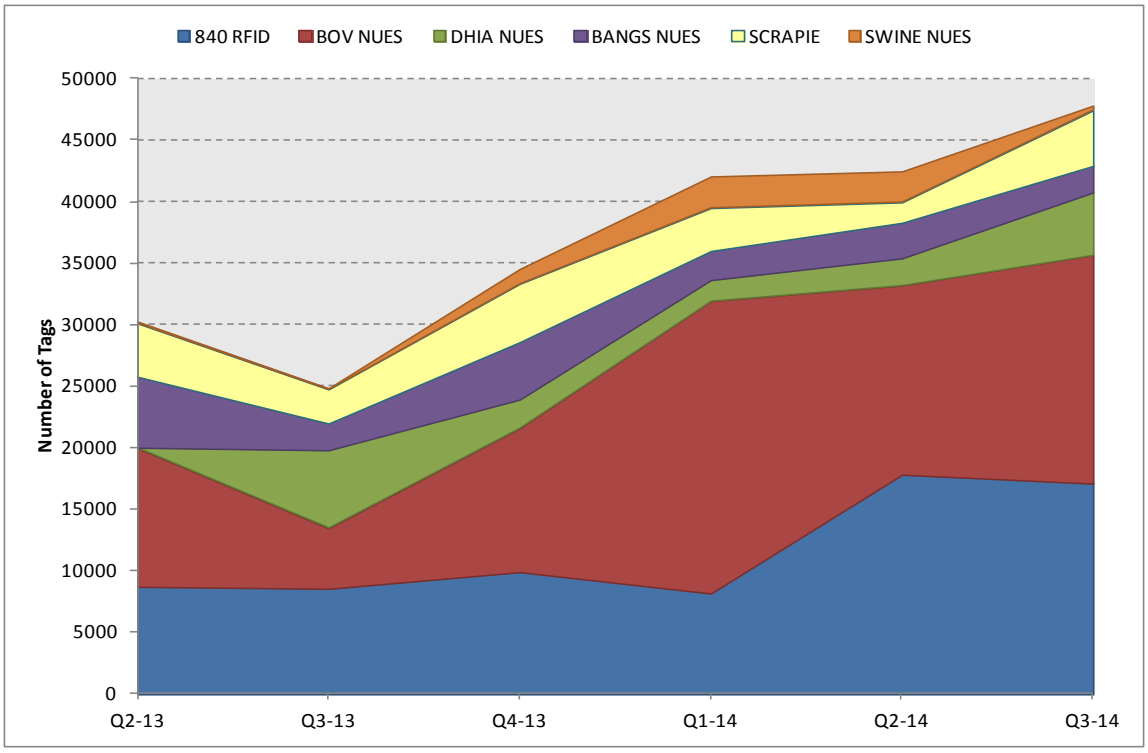


Figure 1. Distribution of official identification tags by type in Virginia over the past 15 months.

Table 2. Annual resource requirements and need for assistance to support Objective 2.

Resource		Purpose	Expected annual cost not covered by state funds
Supplies	60,000 840-RFID tags	Provide permanent, highly readable ID for breeding cattle populations, regulatory animal health programs and 4-H exhibition animals	$75,000
	100,000 silver NUES tags	Provide inexpensive permanent official ID as an alternative to RFID tags	0[1]
	20,000 orange Bangs tags	Provide permanent official ID for cattle vaccinated for brucellosis	0[1]
	20 RFID tag applicators	Replacement applicators	$400
	500 NUES tag applicators	Distribution to cattle producers with NUES tags	0[1]
		Total	**$75,400**

[1]Assumes NUES tags and applicators will be provided by USDA at no cost and in adequate quantities to meet program objectives.

Objective 3 - Improve quality and availability of traceability information

The Virginia ADT Program will continue to promote the use of electronic data collection and management systems to improve the quality and availability of traceability information. In 2011, we started using the CoreOne database application offered by USDA as a part of their Surveillance Collaboration Services (SCS) platform. This is a hosted, web-based application that is easier to learn and use than many typical enterprise database applications and the hosted nature of the service reduces the cost of maintaining a system within VDACS. However, the system is completely controlled and managed by USDA and state personnel have little control over how the system is designed or how it develops over time. Some aspects of the underlying relational data design, the lack of a "front-end" to import data and the lack of an effective reporting tool make the system less useful that it should be in supporting all aspects of animal disease traceability in Virginia. Partial solutions to the above issues will be addressed later in this document, but it should be noted that these deficiencies pose some risk to effective use of program information resources that are growing daily.

In addition to centralizing traceability data storage and management, a number of other systems and procedures have been put in place to improve the flow of electronic traceability data to state and federal animal health officials. Tools such as spreadsheet templates and RFID readers have been made available to private veterinarians, livestock markets and others to facilitate the capture and transmission of electronic animal health records. Additional tools and technologies are being explored that will help close "information gaps" that currently exist in our traceability information systems.

Regulatory Vaccination and Test Records

Approximately 30 percent of vaccination and 39 percent of test submissions are received electronically from accredited veterinarians using Excel templates developed by VDACS. These data are submitted via e-mail and processed through the USDA Mobile Information Management (MIM) application. Test and vaccination records processed via the MIM application are automatically transferred to our animal health database and identification records are transmitted to the USDA Animal Identification Management System (AIMS). We will continue to support this process, but it appears that the adoption rate in terms of template usage by private practitioners has reached a plateau and may require a generational shift in veterinary use of information technologies and/or regulatory mandates to increase the level of electronic submissions. All paper-based submissions are manually entered to the CoreOne database by an animal health technician located in our central office in Richmond, VA. The types of official and unofficial identification used on brucellosis vaccination and tuberculosis test charts is summarized and reported quarterly.

Market Cattle Tagging Program

Electronic traceability data are also captured through the Market Cattle Tagging Program, which uses semi-automated data loggers at 17 market locations to collect 840-RFID and back tag numbers for breeding age cattle at weekly market and consignment sales. In FY2013, over 18,000 records were captured at approved livestock markets and buying stations. We estimate that this program is producing reliable traceability data for over 90 percent of the breeding age cattle coming into Virginia from adjacent states, as well as for those circulating through Virginia farms. Expenses for maintaining these systems have been minimal, but as their use increases we anticipate some maintenance costs for upgrades, repair and replacement. More importantly, the data loggers, which were specifically designed for the Virginia program and market conditions, are only available from a single manufacturer and their future availability is uncertain. An alternative approach may need to be developed if units currently in use cannot be maintained or replaced. State inspectors also utilize portable handheld RFID readers to capture traceability data at markets and other events where data logger systems have not been deployed due to the small number of animals moving through these locations.

Data captured by the Market Cattle Tagging Program has not been entered to CoreOne due to the lack of an import mechanism and staff time. However, the ADT program is evaluating a web-based data processing service and application that will function as a “front-end” for importing animal sightings into our database. Data logger files collected by state livestock inspectors, private practitioners or market staff are uploaded using a standard Internet browser and reviewed online by state personnel. Once approved, data are automatically transferred to the state database and are searchable within 20-30 minutes. The annual cost for this service is estimated at $6,000 to $10,000, but should have a lower cost per record processed and should reduce transcription errors relative to manual data entry. In addition, connecting traceability data collected at Virginia livestock markets to a centralized state database will help demonstrate that public-private data sharing can work effectively and without creating additional regulatory burdens for livestock enterprises.

Interstate Animal Movements

The final major gap with regard to electronic traceability data in Virginia lies with capturing information from Interstate Certificates of Veterinary Inspection (ICVI) or other documents associated with interstate

movement of livestock. VDACS handles over 30,000 ICVI's per year and the vast majority are stored in paper form in filing cabinets. We receive very few (less than 1%) truly electronic certificates from services such as Global Vet Link that provide searchable data. All import certificates are reviewed and significant problems are brought to the attention of the originating state and accredited veterinarian through a formal letter. Practitioners that repeatedly submit incomplete, illegible or incorrect certificates typically receive a follow-up communication (fairly rare occurrence). Reviewing CVI's requires a large amount of staff time (1.5 FTE) and we are not able to capture data elements of interest to traceability with resources currently available. Certificates for imported breeding age cattle are currently scanned and stored electronically, which increases their availability to support animal traces, but none of the information contained in the documents is electronically searchable (i.e., the documents contain scanned images of ICVI's, not searchable data extracted from them).

We are cognizant of efforts around the country to develop electronic CVI applications ("eCVI's") and have reviewed the capabilities of several that are commercially available. However, most of these solutions are unsatisfactory for several reasons: 1) they require the adoption of technologies or practices by private practitioners that we deem unlikely to happen in the near term (e.g., the use of a tablet or laptop computers in the field); 2) they attempt to capture most if not all of the data elements that are typically found on most state certificates (more complicated than is necessary for traceability purposes); and 3), they do not provide data that are integrated with or can be easily imported to our animal health database. Many states have recently developed online animal entry permitting systems and we feel that is the right approach for Virginia. These systems provide data on interstate animal movements that can be reviewed, stored and reported-on electronically, which greatly increases the ability to use animal movement data for traceability purposes.

The capabilities of a currently available commercial application and service will be explored to see if it can be adapted to our needs for animal entry permitting. Our basic requirements for the application/service are that it:

- Is accessed using a standard Internet browser and secure log-in credentials;
- Utilizes a simple, step-by-step approach to guide users clearly through the process;
- Captures standard data elements required to support traceability (location, date, animal ID);
- Produces an animal movement document acceptable to other states;
- Automatically and seamlessly transfers data to CoreOne;
- Contains hyperlinks to online information to assist veterinarians with animal entry requirements.

We expect this system to be functional some time in CY2015 and will be initially released as a voluntary service for accredited veterinarians involved in the interstate movement of cattle to Virginia. Depending on usage and feedback from the livestock community, we may consider making animal entry permits mandatory in the future, which would likely require changes to Virginia statutes and agency policies.

We plan to increase staff time devoted to reviewing ICVI's and reporting traceability data to USDA in 2015 and federal support for 0.5 FTE will be needed for this effort through 2018. This position will also be involved in reviewing data generated by the online animal entry permitting system once it is fully functional.

Table 3. Annual resource requirements and need for assistance to support Objective 3.

Resource		Purpose	Expected annual cost not covered by state funds
Personnel	Agricultural Specialist III (animal health data entry) 1.0 FTE	• Entry of customer, premises and animal health records for all regulatory programs to central database • Entry of tag distribution records to central database • Tracking and reporting types of animal identification used on bovine brucellosis vaccination and bovine tuberculosis test charts • Tracking and reporting on official tag distribution	$0
	Agricultural Specialist III (ICVI processing) 1.0 FTE	• Initial review and management of import ICVI's • Tracking and reporting types of animal identification used on import cattle ICVI's • Tracking and reporting total number of ICVI's by species	$0
	State Veterinarian 0.5 FTE	• Detailed review of ICVI's • Notification of compliance issues • Compliance reporting	$0
Supplies	Maintenance of market data logger systems	• Replacement parts, repairs or complete unit replacement	$3,000
	Portable RFID tag readers	• Collect animal ID at small livestock markets and other events	$780
Contractual services	Annual subscription to StateVet.com service	• Used to process traceability data from Market Cattle Tagging Program • May become the basis for an online animal entry permitting system that would capture data from interstate animal movements	$6,000
		Total	**$9,780**

Objective 4 - Revise state animal health regulations to support improved animal disease traceability

New animal entry regulations became effective January 18, 2012 that will increase the traceability of breeding age cattle coming into Virginia through livestock markets and buying stations. The new regulations require imported breeding age cattle to be tested for bovine tuberculosis, identified with official tags and for these records to appear on an ICVI or other movement documentation. However, livestock market operators in Virginia may choose to sign an agreement with VDACS that exempts them from checking that imported cattle meet state animal entry requirements if they individually identify all

breeding age cattle moving through their markets with official ID. This includes cattle originating in Virginia as well as imported cattle. Almost all markets and buying stations in Virginia have chosen to sign the exemption agreement and are participating in the Market Cattle Tagging Program.

In addition, regulations that govern the operation of livestock markets and cattle dealers are currently being revised and will emphasize responsibilities for recording and maintaining official identification records. We expect that these regulations will be finalized in 2016.

No federal funds are requested to support activities related to this objective.

Objective 5 – Effectively communicate value of traceability to stakeholders

A number of industry and educational organizations are represented on the Virginia ADT Working Group including representatives from Virginia Cooperative Extension, the Virginia-Maryland Regional College of Veterinary Medicine, Virginia Cattlemen's Association, Virginia State Dairymen's Association and Virginia Farm Bureau Federation. We will continue to rely on Working Group members to provide information on the ADT program to their respective stakeholder groups. In addition, information on ADT activities will be provided to cattlemen's and dairymen's organizations to include in their monthly newsletters and to a newsletter published annually by the State Veterinarian. The Program Coordinator will continue to respond to phone calls and e-mail contacts from producers and private practitioners as needed.

Regional state veterinarians will continue to interact regularly with private veterinarians through normal day-to-day operations and through regional accreditation training sessions where traceability issues are discussed (in 2014, 108 practitioners attended accreditation sessions). Practitioners will also receive feedback on data quality and the use of official ID as regulatory documents are submitted to VDACS. The traceability coordinator will continue to work with practitioners on an as-needed basis to promote and provide technical support for electronic submission of traceability information.

Staff with VDACS Office of Veterinary Services will continue to work with livestock markets and buying stations to educate them about requirements for interstate movement, tagging responsibilities under the state exemption agreement and record-keeping obligations. Outreach will typically occur informally as state livestock inspectors interact with market staff at weekly sales, special consignment sales or other events. The ADT coordinator and veterinary staff will also continue to attend annual industry events such as the Virginia Veterinary Conference and Virginia Dairy Expo to promote program objectives and interact with stakeholders.

The program web site (http://www.VAnimalID.info or http://www.VAnimalID.org) was substantially revised and expanded in 2014 and will be periodically updated as needed. Web site content is managed by the program coordinator in cooperation with the Agency webmaster.

Table 4. Annual resource requirements and need for assistance to support Objective 5.

Resource		Purpose	Expected annual cost not covered by state funds
Contractual services		• Attend and exhibit at important industry events such as the VA Veterinary Conference and State Dairy Expo • Promotional materials to assist with outreach efforts (e.g., brochures, flyers, signage)	$3,000
		Total	**$3,000**

Objective 6 - Meet federal traceability performance standards and animal movement reporting requirements

In order to be compliant with the federal ADT Rule and to develop a baseline on which to gauge progress on disease traceability, Virginia must document the time and resources required to trace cattle identification numbers. Confirming the one-time movements of animals with official ID from ICVI or slaughter records is typically fairly easy, however, tracing animals back to farms of origin or through multiple interstate movements can be quite challenging and creating reliable data for the development of a national baseline will require significant effort on the part of program staff. The ADT program coordinator will manage traceability requests (actual or test cases) from federal or state sources and be responsible for reporting results to USDA-APHIS-VS.

Approximately 20 tag traces will be conducted each year based on actual investigations or traceability performance tests. Our focus will be on conducting trace exercises with states that are involved in the majority of breeding age cattle movements to and from Virginia (e.g., Tennessee, North Carolina, West Virginia and Pennsylvania). In addition, tags numbers may be requested from states in the region that receive the majority of Virginia slaughter cattle (Pennsylvania, North and South Carolina). For cattle originating in other states, tag numbers will be generated from records collected at market sales or from ICVI's, vaccination or test documents. Results will be documented using the *State Trace Recording Template* provided by USDA-APHIS-VS and reported on a quarterly basis. Information will also be reported on the number of import and export ICVI's by species and the number of official ID devices distributed.

No federal funds are requested to support activities related to this objective other than those listed in Table 1.

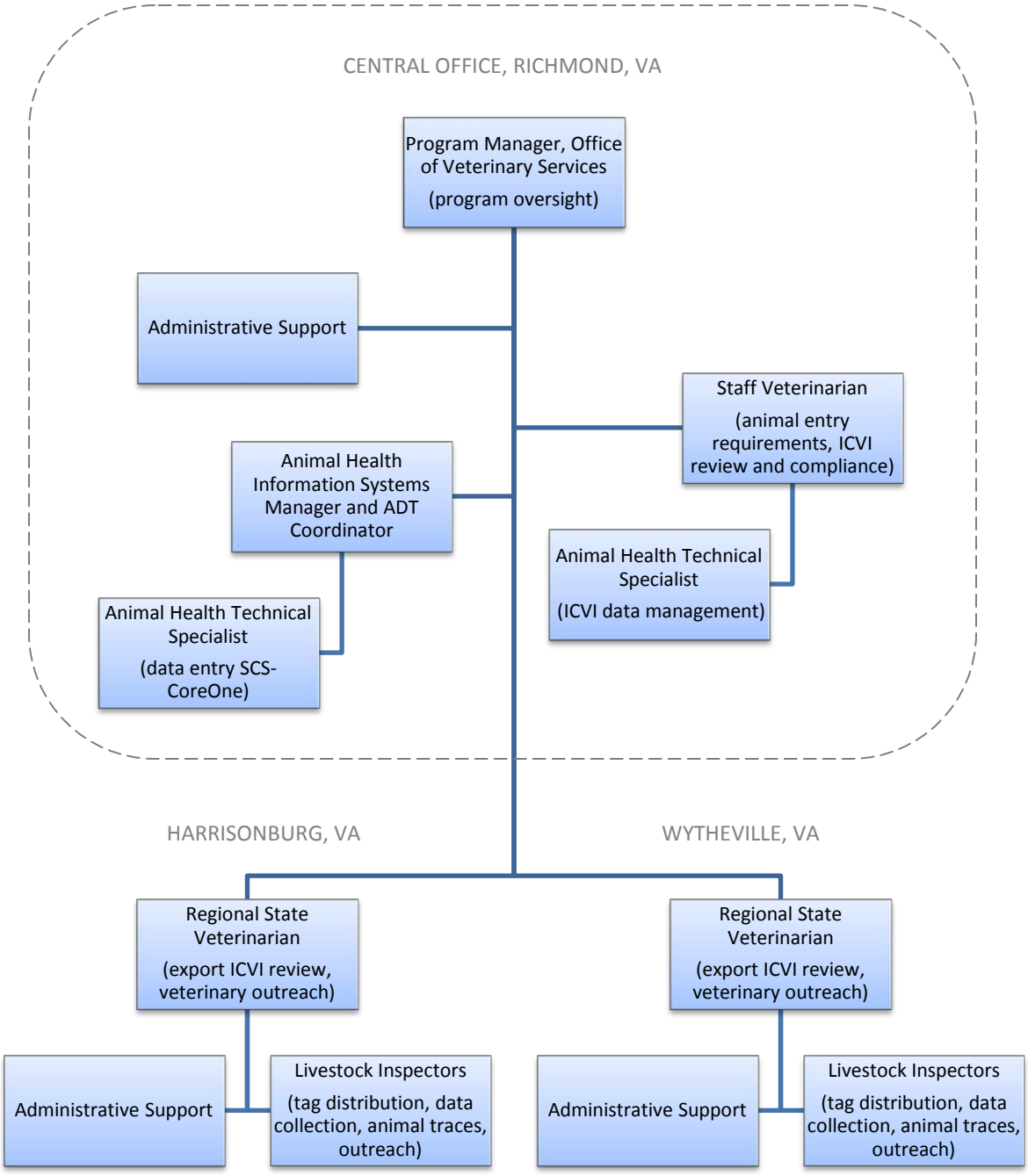
Proforma Annual Financial Plan, 2015-2018

Category	Description	Federal Assistance Needed
Personnel	ADT Program Coordinator, full-time exempt position (1 FTE)	64,165
	Fringe benefits @ 0.4236 rate	27,180
	Subtotal	**91,345**
Travel	In-state	1,000
	Out-of-state (attend regional or national ADT meetings)	3,000
	Subtotal	**4,000**
Supplies	Office supplies	367
	Postage and shipping	200
	Desktop (COTS) software maintenance and upgrades	1,000
	20 tag applicators	400
	60,000 840-series RFID cattle tags	75,000
	4 Handheld RFID readers (e.g., Allflex Pocket Reader)	780
	Market data logger system maintenance	3,000
	Subtotal	**80,747**
Contractual	Annual subscription to StateVet.com service	6,000
	Marketing expenses	3,000
	Annual laptop (1) and network access support for program coordinator (lease required by Virginia Information Technology Agency)	1,680
	Subtotal	**10,680**
Totals	**Total Direct Costs**	**186,772**
	Indirect costs @ 0.3246 rate	20,828
	Total Assistance Needed	**$207,600**

Appendix A: Members of Virginia Animal Disease Traceability Working Group

Name	Title	Affiliation
Hobey Baughn	Executive Director	Virginia Poultry Federation
Bruce Bowman	Regional State Veterinarian	VDACS Office of Veterinary Services
Bette Brand	Legislative Affairs	Virginia Horse Council
Linda Campbell	Goat Producer	Khimara Farm
Jason Carter	Executive Director	Virginia Cattlemen's Association
Jim Chambers	Owner	Rockingham Co. Livestock Market
David Coleman	Owner	Southside Livestock Market
Gilliam Comyn	District Epidemiologist	USDA APHIS VS
James Cook	Dairy Producer	Jareco Farms
Reid Folsom	Equine Consultant	
Mike Carpenter	Program Manager	VDACS Livestock Marketing
Scott Greiner	Associate Professor	VPI&SU Livestock & Poultry Science
Steve Hopkins	Unit Leader	Virginia Cooperative Extension, Orange Co.
Sally Lamb	President	Virginia Horse Council
Tom Massie	Veterinarian	Rose Hill Veterinary Practice
Spencer Neale	Senior Marketing Specialist	Virginia Farm Bureau Federation
Joy Philippi	Executive Director	Virginia Pork Council
Eric Paulson	Executive Director	Virginia State Dairymen's Association
Mark Remick	Asst. District Director	USDA APHIS VS
Andy Seibel	FFA Specialist	VPI&SU Agricultural & Extension Education
Cathy Sutphin	Associate Director	VPI&SU Virginia Cooperative Extension
Leo Tammi	Sheep Producer	Shamoka Run Farms
Pamela Thomas-Buchanan	Associate Professor	Virginia State University
Dee Whittier	Professor	VA-MD Regional College of Veterinary Medicine
Richard Wilkes	State Veterinarian and Director	VDACS Division of Animal and Food Industry Services

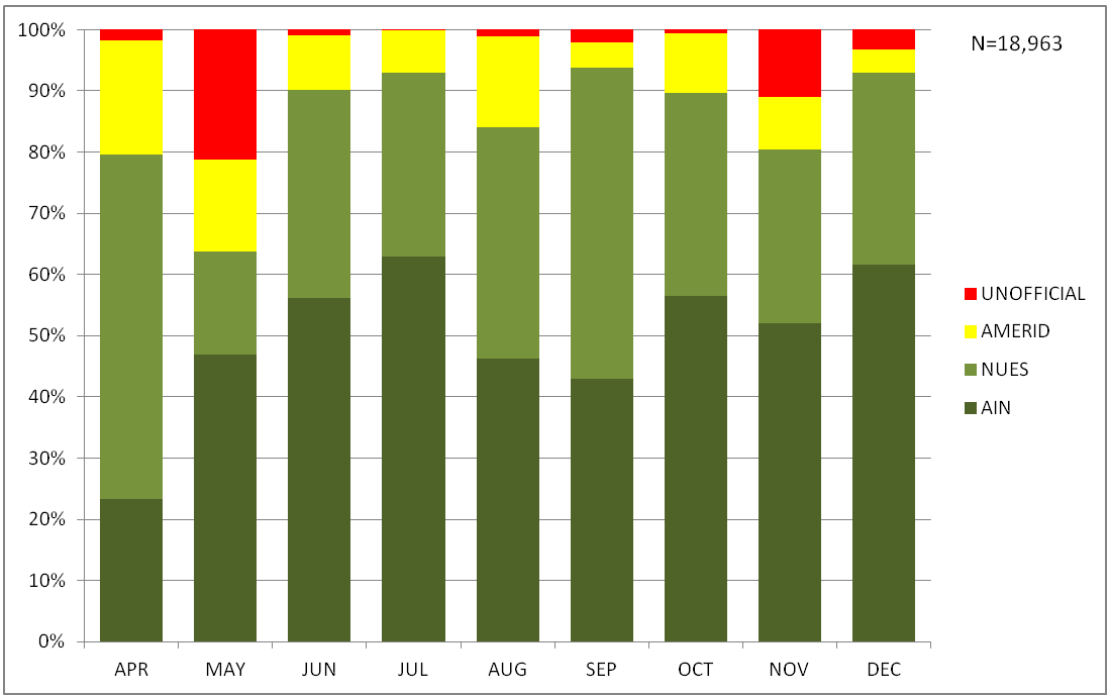
Appendix B: Organizational Chart and ADT-Related Roles in Virginia



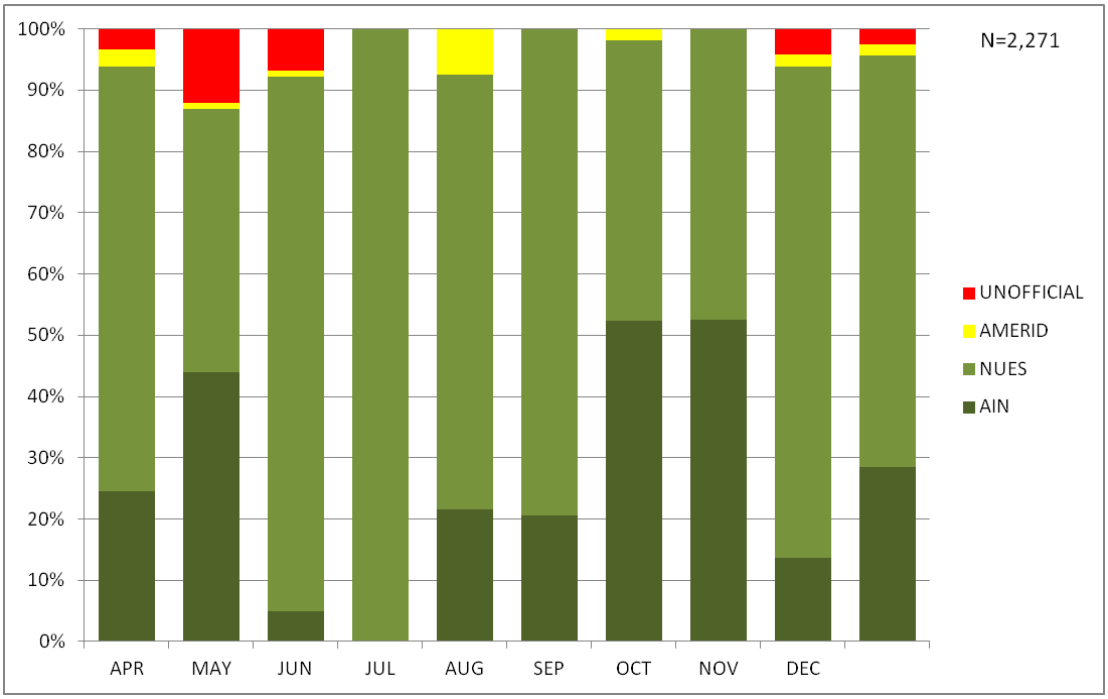
Appendix C: Official Identification Devices Distributed in Virginia for Cattle

Device	Application purpose	Example image
840-series FDX RFID button tag Yellow color "VA" imprint on stud	• Cooperative disease programs • Market Cattle Tagging Program • Extension and 4-H	
840-series HDX RFID button tag White color "VA" imprint on stud	• Cooperative disease programs • Dairy operations using automated milking and feeding systems	
840-series RFID button tag Orange color "VA-OV" imprint on stud	• On-farm brucellosis vaccination	
NUES 9-digit metal tag	• Cooperative disease programs • Animal movements that require official ID • Distributed by United DHIA	
NUES 9-digit metal "Bangs" tag	• On-farm brucellosis vaccination	

Appendix D: Tracking the Use of Official Identification in Virginia



Type of identification submitted on cattle vaccination and test charts in Virginia, April - December, 2014.



Type of identification submitted on import cattle ICVI's in Virginia, April - December, 2014.